

## **REMARKS**

Claims 1-12 are pending. Claim 8 is cancelled herein. Claim 13 is added herein.

### **1. Amendments to the Claims**

Claim 1 is amended.

- Applicants have amended the claim to omit parentheses and extra periods.
- Applicants have amended the claim to clarify the third primer. Support for “the 3’ end of the template 5’-NRWXZ-3’ is linked to the 5’ end of primer 3’-Y-5’ to be a single strand to form substrate 5'-NRWXZY- 3” is found in the Specification at page 13, lines 5-9.
- Applicants have amended N and R to recite that N plus R is 14 mer or more. Support is found in the definition of R (1 mer or more of RNA)(Specification, page 11, line 7) and in the definition of N (Specification, page 11, line 4).
- Support for the “complementary sequences and whose sugars of pair nucleotides are [the] same” is found in the Specification, page 11, lines 10-11.

Claims 3 and 5 have been amended to correct typographical errors.

New claim 13 is supported by the disclosure in the Specification on pages 19 and 20.

No new matter has been added.

### **2. Amendments to the Abstract**

The Examiner objects to the Abstract because it is not presented in paragraph form and is too long. Applicants herein amend the Abstract to comply with these requirements. Support for the

amendments to the Abstract is found in the original Abstract, as filed. No new matter has been added. Accordingly, Applicants request that the objection be withdrawn.

### **3. Claim rejection under §112 Indefiniteness**

The Examiner rejects claim 1 indicating that there are multiple sentences and grammatical errors in the claims. Applicants have amended claim 1 to remove the extra period and to fix any grammatical errors.

#### *Third Primer*

The Examiner rejects claim 1 for reciting three alternate templates to which a primer hybridizes, but only two primers. The Examiner hypothesizes that there may be a loop structure. Applicants confirm that the third structure forms a loop structure, and have amended the claims to clarify the structure. Applicants point out that the Specification discloses that the third primer can be “linked” to the substrate, i.e., “or the 3’ end of the template 5’-NRWXZ-3’ is linked to the primer 5’-Y-3’ to be a single strand to form a substrate 5’-NRWXZY- 3’”. Specification at page 13, lines 5-9. Thus, Applicants submit that one of skill in the art would understand the loop structure formed by the joining of X and Y.

#### *Length of N*

The Examiner states that the length of N is indefinite because the only example shows N = 0 and N is defined as having a length of 13 to 19 nucleotides. Applicants have amended claim 1 to recite that N may be present or absent, if present then N is a 13-19 mer nucleic acid, and N plus R is at least 14 mer. This is supported by the Specification, which defines N to preferably be a 13-19 mer (Specification, page 11, line 4) and that R “can be 1 mer or more of RNA.” (Specification, page 11, line 7). Thus, Applicants submit that the claim covers the example found in the Specification, and clarifies the length of N and R. Applicants request that the rejection be withdrawn.

*W and Z*

The Examiner is unsure whether the presence of W is dependent on the presence of Z or vice versa. Applicants submit that W does not affect either R or Z's function. Moreover Z and W are not functionally tied. If Z is present then W does not necessarily have to be present. The Specification indicates throughout not tying these sequences to the function or presence of other sequences. Thus, Applicants submit that the claim is clear. Applicants request that the rejection be withdrawn.

*Chimeric Nucleic Acids*

The Examiner states that the statement in the Specification that 'chimeric' means constructed from both DNA and RNA is inconsistent with claim 1. Claim 1 states that when X and Y are chimeric nucleic acids that hybridize with each other, they are either both RNA or both DNA, that is not chimeric.

Applicants have made two amendments. First, Applicants have changed the description of N, X, and Y, to be "a nucleic acid." Applicants have also specified what a chimeric nucleic acid is. Thus Applicants submit that the definition of chimeric is sufficiently clear. Applicants request that the Examiner withdraw the rejection.

*Active Steps*

The Examiner states that claim 1 contains no active step for screening the RNase H inhibitor. Applicants have incorporated claim 8 into claim 1. Table I and on pages 19 and 20 discuss inhibition of the RNase H active site. Thus, Applicants submit that the active steps for screening the RNase H inhibitor are included in the claim. Applicants request that the rejection be withdrawn.

*Step (a) and Degradation*

The Examiner questions why the substrate of claim 1 (step (a)) is not degraded by RNase H in the first incubation, prior to the addition of the possible inhibitors. Applicants submit that prior to the addition of dNTPs there is no DNA synthesis, or no RNA: DNA hetero duplex in substrate. Therefore, RNase H can not cleave the substrate according to its specificity of substrate as described in the Specification at page 1, line 30 to page 2, line 5.

### Conclusion

In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark Nuell Reg. No. 36,623 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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